(4) Transportation (5) Genomics & Society (6) Nanotechnology (7) Evergreen Revolution (8) Coping with water scarcity (9) Renewable Energy (10) Science Education Content, Presentation & Purpose (11) Technology challenges for Domestic Water Security in Rural India (12) Bioinformatics Science (13) Sustainablity Science (14) Oceanography & Ocean Technology (15) Current status of Viral Diseases & Control, Novel Management Strategies (16) Public/Private/Industry interaction (17) Defence Science & Technologies (18) Bio-models in Medical Research (19) Stem Cells & Gene Therapy (20) E-learning, E-Governance and Tele-Medicine (21) Science Promotion: International Collaboration (22) India's Energy Security (23) Science for School children. Suggestions emerged on Food and Nutrition Security, Gender Justice and Gender equality, water security, Biotechnology, Climate change and Sea Level rise, Energy, Mass transportation, etc.

Less Number of Researchers in Field of S&T

2158. SHRI N.R. GOVINDARAJAR: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether India has less than 3 lakhs researchers in field of Science and Technology whereas many developing countries have more than 10 lakhs researchers in field of Science and Technology;

(b) if so, the details thereof;

(c) whether Government has any proposal to encourage/promote young scientists including students who discover and continue to research with their new technologies;

(d) whether Government organize competition to trace out such talents; and

(e) if so, the details thereof and the steps taken by Government to increase the number of researchers in Science and Technology?

THE MINISTER OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) and (b) According to the available official statistics, there are 1,15,936 researchers in Science and Technology in India whereas other developing countries such as Argentina, Brazil and China have 26,455, 55,728 and 8,05,176 respectively.

(c) to (e) The Government have taken various steps to encourage young scientists including students for pursuing research in Science and Technology. The various measures taken from time to time to trace and promote the talent are:

Programmes targeted towards talented students:

- Children's Science Congress
- National Science Olympiad Programme
- Kishore Vaigyanik Prothsahan Yojana (KVPY)
- Innovation in Science Pursuit for Inspired Research (INSPIRE) launched in XI Plan includes (i) Scheme for Early Attraction of Talents for Science (SEATS) (ii) Scholarships for Higher Education (SHE) (iii) Assured Opportunity for Research Careers (AORC).
- Setting up of Institutes offering integrated MS and Ph.D. degree through National Competitive Entrance Examinations such as National Institute of Science Education

and Research (NISER), Indian Institutes of Science Education and Research (IISER) etc.

Programmes targeted towards young scientists:

- Swarnajayanti Fellowships.
- Fast Track Scheme for Young Scientists.
- SERC Visiting Fellowships.
- SERC Schools in emerging areas of science and technology.
- Better Opportunities for Young Scientists in Chosen Areas of Science and Technology (BOYSCAST) fellowship to visit international laboratories and institutions.
- Mission HOPE (Higher Education - Opportunities for promoting Entrepreneurship) with the aim of converting aspirations to real enterprises (CARE).
- Contact programmes to attract and motivate brilliant young scientists to take up R&D as a career.
- Enhancement of Junior/Senior research fellowships, research associateships and senior research associateships.
- Diamond Jubilee Research Interns Award Scheme, JRF-GATE and Entrepreneurship support to research scholars.
- Early Faculty Induction Programme, which aims at attracting bright and young undergraduate students in Engineering and Technology/Pharmacy/Architecture, etc. to take teaching as their career.
- S&T based training for entrepreneurial development.

Programmes targeted towards performing scientists:

- The Ramanujan Fellowships.
- The JC Bose National Fellowships.
- The Ramanna Fellowships.
- Shyama Prasad Mukherjee Fellowships.
- Grants-in-aid to support research projects in S&T.
- Financial assistance to scientists to participate in international conferences and training programmes .
- Opportunities to distinguished scientists and technologists of Indian origin settle abroad for short term technical assignments to assists in frontier and emerging areas of S&T.
- Post-doctoral Fellowships in Biotechnology and Life Sciences.

Infrastructure development programmes:

- Intensification of Research in High Priority Areas (IRHPA).
- Fund for Improvement of S&T Infrastructure in Higher Educational Institutions (FIST).

- Setting up of centres of excellence/advanced studies in the universities and academic institutions.
- Creation of core groups of professional with necessary modern facilities required for pursuing research in new and frontier areas of science.
- Creation of new Scientific Departments/Organisations.

Regulatory Authority for Biotechnology

2159. SHRI RAVULA CHANDRA SEKAR REDDY: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether Government has any proposal of constitution of a regulatory authority for biotechnology to govern developments in the segment;

(b) if so, the details thereof; and

(c) if not, the reasons therefor?

THE MINISTER OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) Yes Sir. Government is considering to set up a National Biotechnology Regulatory Authority.

(b) and (c) The Authority would be set up as an independent, autonomous and professionally led body to provide a single window mechanism for biosafety clearance of genetically modified products and processes. Existing mechanisms, however, would continue till a full-fledged body is created with the required infrastructure and fully functional autonomy. Details of organization, scope, hierarchical flow of information, transparency of working, autonomy, training and retraining of regulatory professionals, nature of legislation required are currently being worked out.

Technological Advnaces for Restoring Damaged Human-Organs

2160. SHRI NANDI YELLAIAH: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the details of new research and technological advances made so far with regards to restoring damaged human organs or replacing them with cloned ones specially with regards to kidney transplantation; and

(b) the details of research institutes engaged in this filed of research in India?

THE MINISTER OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) and (b) No research project has been supported to replace damaged human organs with cloned ones especially with regard to kidney transplantation. However, the Department of Biotechnology has implemented a number of projects in the area of tissue engineering for regeneration of cells in cornea, skin, blood vessels, cardiac muscles at Sree Chitra Tirunal Institute for Medical Sciences & Technology, Thiruvananthapuram; Indian Institute of Technology, Kharagpur; Indian Institute of Technology, New Delhi; Indian Institute of Technology, Madras and Christian Medical College, Vellore.